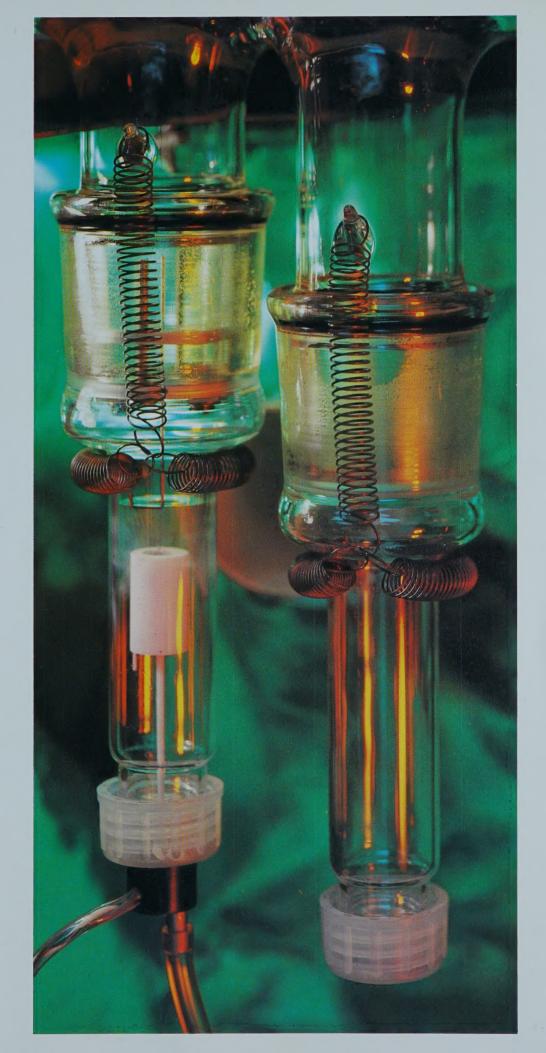


Annual Report 1980

**AR79** 



### Canadian General Electric Company Limited-Operations

### APPARATUS AND HEAVY MACHINERY DIVISION

### DOMINION ENGINEERING WORKS LIMITED

Dominion, a wholly-owned affiliate located in Lachine, Québec, is one of the leading companies in the design and manufacture of heavy machinery and equipment. The company produces hydraulic turbines, papermaking machinery, ore grinding mills, and steel rolling mills.

It has research and laboratory facilities for the development of its own technology, and many design innovations and patents have been developed by Dominion engineers.



### INDUSTRIAL APPARATUS DEPARTMENT

The Department manufactures AC and DC electric motors with ratings ranging from fractional horsepower to custom designed multithousand horsepower units for use in residential, utility, and industrial applications.

A major part of its activities is also focussed on industrial drive systems and process controls for the metals processing, papermaking and mining industries, and specialized industrial systems including marine propulsion, traction motors, mine hoists, alternators and control systems for diesel-electric locomotives and off-highway "electric wheel" generators and alternators. Plants are located in Peterborough and Trenton, Ontario



## POWER DELIVERY DEPARTMENT

The Department manufactures equipment for transmission, distribution, regulation, and measurement of electrical energy. Products include transformers, static compensators, switchgear, watthour meters, instruments and appliance controls. Plants are located in Guelph, Peterborough and Toronto, Ontario; Sackville, New Brunswick; Québec City and St. Augustin, Québec; and the U.K.



### POWER GENERATION DEPARTMENT

The Department provides a full range of electric generators for use with hydraulic, steam and gas turbines. It also supplies steam and gas turbines used in the development of Canada's natural resources. The Department contributes to the development of Canada's CANDU nuclear system through the development and manufacture of nuclear fuels and fuel handling systems. Plants are located in Peterborough and Toronto, Ontario, and in Lachine, Québec.



### APPARATUS AND HEAVY MACHINERY SALES DEPARTMENT

The Department is a pooled sales operation within the Division selling to industrial and utility customers. It has offices in major Canadian cities and an international sales group active in many countries.

### CONSUMER AND CONSTRUCTION PRODUCTS DIVISION

### MATERIALS AND SPECIALTY SYSTEMS DEPARTMENT

The Department manufactures television broadcast equipment, mobile radios, silicone fluids and compounds, Lexan® sheet, molded plastic components, chemical resins and fibreglass reinforced products. It distributes other General Electric products in aerospace and information services markets. Plants are located in Cobourg and Toronto, Ontario, and St. André Est, Québec.



### LAMP DEPARTMENT

The Department manufactures and sells to the commercial and industrial, retail, automotive and export market, a wide range of incandescent, fluorescent, high intensity discharge and photo flash lamps. Plants are located in Toronto, Montreal, and Oakville.



### CONSTRUCTION PRODUCTS DEPARTMENT

The Department produces circuit protective devices, distribution assemblies, motor control centers, general purpose control equipment, magnet wire, ballasts, lighting systems, heating products, traffic control equipment and remote control wiring systems for the construction industry and industrial and commercial users. The Department has plants in Toronto, Markham, Peterborough and Guelph.



### HOUSEWARES AND HOME ENTERTAINMENT DEPARTMENT

The Department manufactures and/or distributes portable kitchen appliances; garment, personal and home care products; audio equipment; heat pumps and home heating and air conditioning equipment and lawn care products. The Department's manufacturing plants are located in Barrie, Ontario, and Stratford-Upon-Avon in the U.K.



### GESCAN DEPARTMENT

The Department is the Company's electrical supplies distributor and operates as an authorized distributor for over 200 other companies manufacturing electrical products. Major markets served are construction, commercial, industrial, government, and utility. The Department has facilities in 50 Canadian towns and cities.



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<sup>®</sup> and <sup>®</sup> indicate respectively registered and unregistered trademarks of Canadian General Electric Compan Limited

ON THE COVER:
At the engineering laboratory in Peterborough, this precision instrument measures the effect of high temperatures on natural and man-made materials through thermogravimetric analysis. Such research permits development of insulation which results in more efficient electrical equipment.

### **Meeting Notice**

The Annual General Meeting of Shareholders of Canadian General Electric Company Limited will be held in "Commerce Hall," Commerce Court West, (King & Bay Streets), Toronto, Canada, on the 29th day of April, 1981, commencing at 10 o'clock in the forenoon.

Pour un exemplaire de ce rapport en français, s.v.p. écrire au Secrétaire.

Highlights of Operations Canadian General Electric Company Limited	1000
and Consolidated Affiliates	
FINANCIAL Sales of products and services (millions) Net earnings (millions)	\$1465.9 44.9
MEASUREMENTS Net earnings per share (dollars) Dividends declared per common share (dollars) Net earnings as a percentage of average shareholders' equity Earnings as a percentage of sales	5.49 1.80 11.7% 3.1%
STATISTICAL Number of employees at year-end Number of common shareholders at year-end	20 213 1 227
Distribution of 1980 Sales dollar	
To suppliers 60.7%	
T. P. J. Olem	
To Employees 31.6%	
Taxes 2.3%	
Reinvestment 4.4%	

1979

4.69 1.75

10.8% 3.0%

20 659 1 208

\$1338.7 38.3

### Report to Shareholders



ALTON S. CARTWRIGHT

On behalf of the Board of Directors, I am pleased to present the Annual Report including the audited Consolidated Financial Statements for 1980.

In a year marked by uncertainty in the key energy sector, a slowdown in residential construction, recovery initiatives in automotive manufacturing and indications toward year-end that the economy was moving ahead in real terms, the Company's consolidated sales of products and services increased by 9% to \$1.47 billion.

Net earnings for the year were \$44.9 million (\$5.49 per share), compared with \$38.3 million (\$4.69 per share) last year, an increase of 17%.

Dividends paid in 1980 were \$1.80 per share. Last year, the dividend payment was \$1.75 per share.

Export sales, both direct and indirect, increased by 24% to attain a level of \$158 million. Export shipments included hydroelectric generators, hydraulic turbines, power transformers, AC and DC motors, mine hoists, ore grinding mills, paper making machines, metal rolling mill equipment, industrial rectifiers, major appliance products, kettles, frypans, humidifiers, electric lawnmowers, lamps, TV broadcast transmitters, plastic components, fiberglass reinforced material products, electrical baseboard heaters and automotive heaters.

Exports were made to 48 countries with 42% going to the U.S.A., 32% to Central and South America and Caribbean countries, and the balance to other countries.

These orders are representative of the emphasis on international sales in all departments which has helped exports become the fastest growing market for CGE products over the past five years.

The increase in total sales in 1980 was due mainly to customer capacity expansion programs in resource industries and heavy manufacturing, sustained activity in commercial and industrial construction, and a strong emphasis through all operating departments in the Company on programs geared to increase market penetration.

In the electrical apparatus and components segment, total revenues were 12%

above 1979 and net income was 28% higher. These results reflect strong sales performance in transportation equipment and industrial machines, including digital drives for pulp and paper machines. Significant shipments to customers included the first static compensators for Hydro-Québec's James Bay transmission system at Nemiskau. Orders received included the supply of high current bus duct for the La Grande 4 development of la Société D'Energie de la Baie James, a fuel handling system to be installed at the Darlington Nuclear Generating Station of Ontario Hydro and traffic control systems, incorporating advanced technology acquired by CGE in 1980, from several Canadian municipalities.

Total revenues in the machinery, technical systems and materials segment remained at the previous year level, while net income declined by 37%. Capacity expansion programs by resource industry customers and the addition of new technology to serve technical system markets continued to be the main sources of revenue in this segment. The Company completed a major shipment of ore grinding mills to customers in Western Canada. Orders were also received for molded plastic components for automotive parts and a new document handler to be exported by the customer.

The consumer products and services segment recorded an increase in total revenues of 11% but a decrease in net income of 26%, reflecting the decline in profitability experienced by the appliance businesses. Emphasis continued on improving productivity in manufacturing and serving increasing consumer requirements for

energy-saving products. Thirteen new housewares products were successfully introduced to the market in 1980, including a redesigned four-slice toaster, frypans featuring non-stick surfaces and the POTSCRUBBER® II dishwasher. Customer service operations were improved for major appliance customers through the integration of 32 service branches and installation of a computerized system which monitors customer calls and transmits the data to the manufacturing operation.

For the company, total orders received in 1980 increased by 4% from the previous year to \$1.5 billion. The orders came mainly from the manufacturing, resource and construction industries. The backlog of unfilled orders at year-end totalled \$1.2 billion, up 11% from the

previous year-end.

Capital expenditures on plant and equipment in 1980 were \$72 million compared with \$41 million in 1979. Expenditures on new machinery to improve productivity and increase capacity constituted a major portion of the investment. Manufacturing capabilities for hydraulic turbine components, ore grinding mills and steel mill equipment were significantly improved through a \$6 million investment in new machinery. Major investments were made to meet the capacity and quality requirements of industrial apparatus customers and advances in automation were achieved with a robotics installation for the manufacture of meters and instruments. Capital expenditures on automated equipment included facilities for the production of filament wound composites and a \$4 million plant modernization program for the manufacture of kettles and frypans.

CGE expanded its participation in Canadian resource development, investing a further \$14 million in 1980 on oil and gas exploration in Western Canada. Participation in energy development was broadened by the acquisition of Widney Well Servicing (1971) Limited, an Albertabased company operating a fleet of oil and gas well service rigs. This new business complements the Company's thrust to bring its technologies and other strengths to support natural resource industries in Canada.

A significant increase in the capacity to manufacture magnet wire came from the purchase of a magnet wire plant from Pirelli Cables Limited located in Guelph,

Research and development expenditures were \$20.4 million for 1980. These direct R&D expenditures are the leading edge of a commitment to innovation and development met by the 850 engineers and technologists in the Company. In 1980, this commitment was continued with an emphasis on high voltage transmission, digital control systems, pump turbines, hydraulic turbines and hydroelectric generators. R&D expenditures more than doubled for the production of higher efficiency lamps and related manufacturing equipment.

Energy conservation in products and manufacturing processes continued to be a major objective in 1980. Products such as programmable lighting control systems, plastic automotive components and irons, energy-saving major appliances, heat pumps and high efficiency motors for

industry helped the Company contribute to customer conservation goals. At plants and offices, conservation programs continued through the application of insulation materials and new energy-saving equipment. In the five-year period following the establishment of a CGE Energy Council in 1974, the Company reduced oil consumption by 60% and today only 10% of our production processes are dependent on the utilization of oil as an energy

*Employment* in the consolidated group was 20,213 persons at December 31, 1980, compared with 20,659 at the end of last year. The Company broadened its extensive group of programs in skill training and management development. In cooperation with the University of Toronto, an Advanced Engineering Course was developed and CGE engineers enrolled in the program can earn a Masters Degree in Engineering through a curriculum combining formal studies with professional projects. In-plant courses were introduced to technical employees in preparation for the significant impact of electronics on manufacturing processes. Management and professional employees from all departments participated in a new Professional Employee Management course emphasizing human relations skills. For new graduates joining the finance, engineering and employee relations functions, participation in the long-established development programs provided a valuable grounding in management disciplines associated with these fields.

The directors are proud of Canadian General Electric employees and express their sincere gratitude for a successful year.

ALTON S. CARTWRIGHT Chairman of the Board and

alter & Carturyto

Chief Executive Officer



### **Apparatus and Heavy Machinery Division**



The Apparatus and Heavy Machinery Division continued its growth trend, substantially increasing sales over 1979 and contributing significantly to overall Company results. New orders exceeded budget, resulting in an all-time high for unfilled orders at year end of over \$1 billion.

Significant Division resources were devoted in 1980 to improving productivity and pursuing new business development opportunities. In support of long term productivity objectives, 1980 capital expenditures increased 56% over 1979. The utilization of computer design techniques was increased through additional investment in numerically-controlled machine tools and interactive graphics drafting systems. The initial application of robots and micro-processor technology were also examples of productivity improvement aimed at increasing overall competitiveness.

International sales which represented 20% of 1980 shipments, have been identified as a prime business development opportunity. Orders were obtained from several countries including China, Australia, USA, Mexico, Chile, Peru, New Zealand, Indonesia, the Philippines, Madagascar, and Venezuela, reflecting the world-wide recognition of the Company's experience and reputation acquired on Canadian installations. The paper machinery business achieved record orders during the year.

An hydraulic turbine and generator technology agreement has been concluded with a Brazilian company. Research and development effort, a cornerstone of the Division's success, continued at a high rate with emphasis on high voltage transmission, digital control systems, hydraulic turbines and generators, and grinding mills. These actions will position the business for increased growth in sales and profitability.

DOMINION ENGINEERING WORKS LIMITED. Productivity improvement applied to the needs of our customers in Canada and around the world resulted in major orders during 1980.

An order was obtained for completion of a reversing roughing mill, crop shear and downcoiler were received from Stelco as part of a new 80-inch Hot Strip Mill for Stage II of the Lake Erie development. When completed in 1982, the mill will produce hot rolled coils from cast slabs at the steel making plant. The order represents the continuing contribution of Dominion Engineering Works to the growth and development of Canada's world class steel industry.

Another first was achieved this year in the manufacture of equipment for the mining industry. The world's largest gear for an ore grinding mill was manufactured for the Lornex Mining Corporation in British Columbia. The alloy steel cast gear, which will be used to drive Lornex's primary semi-autogenous ore grinding mill with a 12 500 horsepower capacity, has an outside diameter of 39 feet 4 inches, 408 teeth and weighs approximately 80 tons.

Dominion's world-wide reputation for quality and performance in paper-making machinery was a factor in obtaining an order from Donohue-Normick Incorporated for a high speed newsprint machine complete with CGE digital sectional electric drive. The machine, to be installed at Amos, Québec, and scheduled to begin operation in 1982, will produce 500 tons of commercial newsprint a day, and at speeds of 3 500 feet per minute, in rolls 300 inches wide.

Dominion has consistently placed priority on research, new technology and productivity improvement. During 1980, this commitment continued on many fronts.

The Company's hydraulic turbine research team continued work on the pump turbine development project for Lac Delaney. The goal is to develop a reliable, efficient pump turbine, and efforts have been concentrated on the study of pump cavitation.

In the hydraulic turbine section, work progressed on the installation of a computer-integrated graphics system for the generation of hydraulic turbine blade designs.



When fully operational, this system will enable Dominion to design a turbine blade shape on the graphics screen, perform various flow analyses, and produce a full-scale pattern drawing of the blade. The new system will also produce tapes for the numerically controlled machining of turbine blades.

Manufacturing facility investments over the past year supported a major advance in productivity and competitiveness for Dominion. Manufacturing capabilities were increased by the installation of a new computer-integrated vertical boring mill with a 500 ton table capacity, and the near completion of an extra large horizontal boring mill with a 40-foot long table. A combined investment of \$6 million, the two machines will provide capacity to speed delivery of components for hydraulic turbines, grinding mills and steel mill equipment.

Through 1980, its 60th year of operation in Canada, Dominion Engineering Works continued to allocate resources to further enhance its ability to serve customers with top quality, up-to-date designs and high performance of its products.

INDUSTRIAL APPARATUS DEPARTMENT. During 1980 the Department secured significant orders in virtually every segment of the industrial drive systems business.

The installation of the first digital paper machine drive in Canada, incorporating micro-processor controls, is underway at the MacMillan Bloedel Ltd. Powell River plant in British Columbia. Building on this new technology, Industrial Apparatus obtained orders for six additional digital drives in Canada.

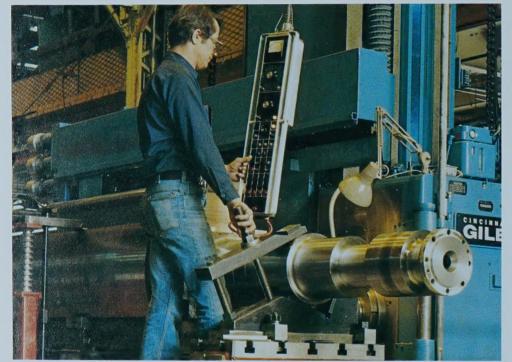
In mining, shipments of ore grinding mill drives were made during the year for the Highland Valley mining area in B.C.,

ABOVE LEFT:
D. Forrest Rankine
VP and Division Executive

ABOVE RIGHT:
A 100 ton ore grinding mill head, the
largest ever manufactured by
Dominion Engineering Works Limited.

LEFT:
At Dominion Engineering Works, the
traditional craft of model making continues to
play an important part in the computer age.





including the first two low-torque quadratorque synchronous drives built by Industrial Apparatus.

Orders were secured for hot strip mill automation equipment from two of Canada's leading steel companies. These orders represent many millions of dollars in business and reflect the continued heavy demand for steel in Canada.

Propulsion drives were ordered by the Canadian Government for the third "R" class twin-screw icebreaker.

Orders for industrial alternating current (AC) machines rose sharply, due mainly to CGE success in international markets. In 1980, 20% of industrial AC machine orders were for export to the U.S.A., Mexico, Chile, Peru, New Zealand, Indonesia, China, the Philippines and Madagascar.

To support the heavy manufacturing demands and quality standards associated with these industrial orders, the Department continued its program of investment in equipment. New automated manufacturing equipment included two horizontal boring mills, a 50-ton capacity CNC (computer numerically-controlled) engine lathe for the intricate turning of large shafts and rotors, three microprocessor-controlled baking ovens for armatures, an interactive graphics terminal and a large computer controlled co-ordinate measuring machine for stringent quality control.

The Small Motors business continued its substantial long-term investment program. Equipment investment in the Appliance Motor segment included an automatic single and two-speed winder, an aluminum babbitt bearing machine, a 500 ton press for endshields, and new switch manufacturing facilities.

In the Induction Motors and General Purpose Motors segments a major facilities upgrade program continued. New induction motor NC equipment was installed for shaft and endshield manufacture and a new stator winding machine was added.

In General Purpose Motors, facilities were upgraded in assembly and packaging

ABOVE

An automated induction motor stator winding machine in the Small Motors Section.

BELOW

Large horizontal boring mill used in the manufacture of industrial alternating current machines.



and a new annealing furnace for stator laminations was ordered.

High efficiency motors were introduced to the market making a strong contribution to the energy conservation goals of our customers.

The Industrial Apparatus Service Shop business continued its strong growth with a dramatic 25% increase in heavy electrical and mechanical equipment repair sales over the past year. The ninth Service Shop was opened in Kamloops, British Columbia, where the main operations will be electrical and mechanical repairs to the motorized wheels of off-highway vehicles used in open-pit mining in central B.C.

POWER DELIVERY DEPARTMENT.

Major capital expenditures and innovations in materials management and manufacturing technology in 1980 gave momentum to the Power Delivery Department's thrust to improve productivity and product quality.

In the Power Transformer Operation at Guelph, Ontario, the investment program for productivity improvement included installation of a computerized high-speed steel shearing machine and a 180 ton capacity automatic lifting device to improve capability in laminated steel core manufacturing. The operation also continued its computer systems development in

manufacturing resource planning to improve production scheduling and monitor investment in inventory.

The Meter and Instrument Section in Québec City made further advances in automation with the application of robots and mini computer/micro-processor technology. Integration of automated test facilities in conjunction with a climate-controlled manufacturing area has improved quality and increased productivity in the manufacture of watthour meters.

The Switchgear Operation at Peterborough continued its investment program with the purchase of additional numerically-controlled machines. These



machines will help to reduce costs and improve the quality in the manufacture of many complex parts required in power circuit breakers.

A major accomplishment in the Department's strategy to increase exports was a large transformer order for the Guri Project on the Caroni River development in Venezuela. The order was secured against competition from other international companies and reflects our experience and reputation acquired on similar Canadian installations.

The international recognition CGE has earned for its expertise in the manufacture of large industrial rectifiers for the smelting and chemical industries is exemplified

by the order from Alcan for the third stage of its Grande Baie project.

The Company previously supplied rectifiers and transformers for stages I and II of this large aluminum smelting complex.

An order was received from la Société D'Energie de la Baie James for the supply of bus duct for La Grande 4 (LG 4) development. This high current bus duct will carry the current from the generators to the step-up transformers. The manufacture of the bus duct for LG-2 was completed in 1980, almost six months ahead of the original schedule.

During the year, the first static compensators for Hydro-Québec's 735 KV James

Bay transmission system at Nemiskau Substation were delivered and made ready for final commissioning tests. The Department is presently manufacturing two similar units for the Albanel Substation, also on the James Bay system. The Company's first static compensator installation on Hydro-Québec's system at Rimouski, commissioned in 1978, has recorded excellent reliability.

Product integration combined with the project management and technical capability of the Power Systems Section, has positioned the Power Delivery Department as an international leader in the supply of high voltage direct current transmission and static compensator systems.

POWER GENERATION DEPARTMENT.

The Power Generation Department recorded a very successful year in 1980 with a high level of orders received and a record level of sales billed. During the year, the Department made a number of important achievements in technology, productivity improvement, and resource allocation.

The Company's global reputation in hydroelectric generators led to new orders for both the domestic and United States markets. Newfoundland and Labrador Hydro ordered an 88.4 MVA unit for the Upper Salmon River project, and CGE won an order for a prototype 19.1 MVA rim type hydroelectric generator for the Annapolis Royal Tidal Power Project of the Nova Scotia Power Commission. Additional orders included two 34.7 MVA units for the International Boundary and Water Commission at Amistad, Texas and one 84.2 MVA unit for the U.S. Corps of Engineers' project at Hartwell in Georgia.

Two 700 MVA hydroelectric generators for the Guri II project in Venezuela were completed and shipped, as were an additional four 370 MVA units for the La Grande 2 portion of Hydro-Québec's

James Bay Project.

Manufacturing of hydroelectric generators was consolidated at the Company's Scarborough plant where a substantial investment in NC machining and welding centres has been linked to a new computer assisted design/manufacturing system. A computer integrated vertical machining centre has improved productivity in machining a variety of components and a new NC plasma cutting table provides the capability to cut heavy steel plate into any required shape. The interactive graphics system installed at Scarborough will greatly speed preparation of drawings and NC machine instructions.

These investments will add to the capability of the Scarborough plant to produce a variety of heavy equipment for different markets. Air locks for Ontario Hydro's Darlington Nuclear station and bases for gas turbines utilized in U.S. Navy frigates and destroyers are examples of orders for such equipment this year.



The Department's Nuclear Fuel Section continued to invest in new equipment and processes to increase productivity. In its Toronto plant a sintering furnace has accelerated production and improved the quality of fuel pellets. During 1980, fuel bundles were fabricated for Ontario Hydro's Bruce and Pickering reactors and for export to the Wolsung nuclear plant in Korea. Orders for production in 1981 were received for these stations as well as for the Douglas Point station.

The technological strength of the Nuclear Fuel Handling Section contributed to an order for the supply of the complete fuel handling system for Ontario Hydro's 3400 MW Darlington Nuclear Generating station. For the same customer, the Section shipped one fuel handling machine for the Bruce B Generating station, and completed the installation of fuel channels for the Bruce No. 6 reactor on schedule by the Section's Components Development Installation and Service Unit.

Apparatus Technical Service (ATS) Sec-

tion enjoyed a successful year, carrying out many projects in Canada and abroad. The Section commissioned four hydroelectric generators for Hydro-Québec's LG-2 project, two units at the Charlot River project in Saskatchewan and two units at Itumbiara, Brazil.

ATS completed the installation and quality assurance control on the Nemiskau Static Compensator for Hydro-Québec, and commissioned two paper machine installations, a digital drive system for MacMillan Bloedel at Powell River, B.C. and an installation at Midtec, Wisconsin. In September, the installation of steam turbines, generators and auxiliaries began at Ontario Hydro's Bruce B Nuclear station, supported by a newly developed computerized project control system.

The Department's investment program for equipment, technology, and systems will improve productivity contributing significantly to the Company's competitiveness and leadership in the power gen-

eration industry.

Rotor Fabrication for Guri II project in Venezuela (700 MVA)

NEXT PAGE

Computer technology integrated with advance machine tools to design and manufacture components at the Scarborough plant.



### 1980 Financial Information

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## **Summary of Significant Accounting Policies**

The Financial Statements on pages 13-16 and the related notes on pages 17-20 are prepared in conformity with accounting principles generally accepted in Canada. As an aid in evaluating these Financial Statements, the most significant of the principles followed by the Company are described below.

**BASIS OF CONSOLIDATION** 

The Financial Statements in this report consolidate the accounts of Canadian General Electric Company Limited, its wholly-owned subsidiaries and the companies in which it has a majority equity interest ("affiliated companies") except the finance subsidiary which has been accounted for by the equity method. The finance subsidiary has not been consolidated because its financial statement components are dissimilar to those of the consolidated group and management believe that its consolidation would not provide the more informative presentation to the shareholders. Associated companies in which the Company is able to exercise significant influence have been accounted for by the equity method.

All inter-company transactions and profits thereon have been eliminated in these consolidated financial statements. A list of active companies in the group

is shown on this page.

#### SALES

Sales of products and services to customers are reported in operating results only when title to products and materials passes to the customer or when services are performed as contracted.

### PENSIONS

The Company and its affiliates have a number of pension plans. The largest of these plans is the Canadian General Electric Pension Plan which uses the unit credit actuarial valuation method which assumes that a unit of pension benefit accrues in each year of credited service.

Current service costs are charged to operations as they accrue. Past service costs arising from improvements to the plans are charged to operations over varying periods which approximate the remaining service lives of the employees

Investments of Canadian General Electric Pension Trust, which funds the obligations of the Canadian General Electric Pension Plan, are recorded at cost plus a programmed portion of unrealized appreciation on equities. This accounting reflects long-term market trends with the objective of adding to cost over time such amounts as will result in an average common stock book value not more than 90% of its average market value over the prior five years. The actuarial funding program uses 8% (1979-7%) as the estimated rate of future earnings of the Trust.

TRANSLATION OF FOREIGN CURRENCY
Foreign currency transactions are translated to Canadian dollars at the rate of exchange in effect at the date of the transaction. Foreign currency balances are translated using the rate of exchange in effect at the year-end date.

The foreign currency financial statements of foreign subsidiaries are consolidated by translating current assets and current liabilities to Canadian dollars at the rates in effect at the year-end date and property, plant and equipment at the rates prevailing at the respective dates of acquisition. Revenues and expenses are translated at average rates prevailing during the year except for depreciation which is translated at the rates prevailing when the related assets were acquired.

Foreign currency exchange and translation gains and losses are included in earnings currently.

#### INVENTORIES

Inventories are valued at the lower of cost and net realizable value. Cost is determined using the first in, first out (FIFO) method for substantially all inventories and is based on the cost of material, direct labour and applied manufacturing overhead.

PROPERTY, PLANT AND EQUIPMENT
Plant and equipment is recorded at the original cost of land, buildings and equipment, less accumulated depreciation. The diminishing balance method is used to depreciate all plant and equipment except for leasehold improvements and certain equipment leased to third parties, which are amortized using the straight-line method. The depreciation rates applicable to buildings, and machinery and equipment are principally 5% and 20% respectively. On major dispositions, the related costs and accumulated depreciation are removed from the accounts and any resultant gain or loss is included in earnings. Expenditures for maintenance and repairs are charged to operations as incurred.

Oil and gas resource properties are accounted for by use of the full cost method, whereby all costs related to exploration and development are capitalized and amortized by a unit-of-production method based on estimated recoverable reserves.

RESEARCH AND DEVELOPMENT
Research and development expenditures are charged to operations as incurred.

WARRANTIES

Provision for product warranty costs is made by a charge to operations in the year the product is sold.

PARENT COMPANY
General Electric Company

General Electric Company, Fairfield, Connecticut, U.S.A.

AFFILIATED COMPANY
Canadian Appliance Manufacturing

Company Limited (60% equity interes

WHOLLY-OWNED SUBSIDIARIES
Amalgamated Electric Corporation
Limited

International Limited
Cange Limited (United Kingdom)
Dominion Engineering Company Limited
Dominion Engineering Works Limited
Genelcom Limited

Montreal Armature Company Limited N. C. Joseph Limited (United Kingdom) W. L. Stevens Ltd.

Widney Well Servicing (1971) Ltd.

NON-CONSOLIDATED WHOLLY-OWNED SUBSIDIARY Genelcan Limited

ASSOCIATED COMPANY
Smith & Stone Limited (34% equity
interest)

Canadian General Electric Company Limite	ed
and Consolidated Affiliates	

# Consolidated Statement of Earnings (\$000's)

	01 Lax 1111153 (\$000 3)			
	For the years ended December 31		1980	1979
SALES OF PRODUCTS AND SERVICES	(no	te 1)	\$1 465 871	\$1 338 730
OPERATING COSTS	Employee compensation, including benefits (no Materials, supplies, services and other costs Depreciation and amortization Taxes, other than on income	ote 2)	463 915 890 261 29 443 10 856	408 107 833 715 23 765 10 533
			1 394 475	1 276 120
OPERATING MARGIN	Other income (no Interest and other financial charges	ote 4)	71 396 9 686 (12 591)	62 610 10 858 (8 264)
EARNINGS BEFORE INCOME TAXES AND MINORITY		ote 5)	68 491 22 629 936	65 204 24 665 2 209
NET EARNINGS			\$ 44 926	\$ 38 330
	Net earnings per common share		\$5.49	\$4.69
	Consolidated Statement of Retained Earnings (\$000's)			
	For the years ended December 31		1980	1979
!	Retained earnings, beginning of year Net earnings Contribution from parent company	ote 6)	\$ 343 234 44 926 — (14 721)	\$ 314 526 38 330 4 694 (14 316)
RETAINED EARNINGS, END OF YEAR			\$ 373 439	\$ 343 234

The information on pages 12 and 17-20 is an integral part of these statements.

Canadian General Electric Company Limited and Consolidated Affiliates

# Consolidated Statement of Financial Position (\$000's)

	of I maneral I osition (\$000 s			
	At December 31		1980	1979
ASSETS				
	Current assets: Cash Short-term investments Current receivables Inventories Deferred income taxes	(note 7) (note 8) (note 9)	\$ 4550 276 793 381 947 19 327	\$ 6 934 25 600 274 418 352 618 21 646
			682 617	681 216
	Long-term receivables Long-term investments Property, plant and equipment	(note 10) (note 11) (note 12)	36 051 9 700 193 062	39 359 10 334 142 354
	Deferred charges and other assets	(note 13)	35 281	30 885
			\$956 711	\$904 148

The information on pages 12 and 17-20 is an integral part of this statement.

	1980	1979
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities: Short-term borrowings (note 14) Accounts payable (note 15) Progress collections Dividends payable Taxes payable Other liabilities and accruals (note 16)	\$ 58 900 105 568 134 954 3 681 4 684 126 875	\$ 9 848 146 129 121 545 3 681 28 897 122 893
Long-term borrowings (note 17) Non-current accruals (note 18) Deferred income taxes Minority interest	434 662 54 269 30 095 27 504 9 747 556 277	432 993 44 979 27 768 19 361 8 811
Shareholders' equity: Capital stock (note 19) Retained earnings	26 995 373 439	27 002 343 234
Total shareholders' equity	400 434	370 236
	\$956 711	\$904 148

Commitments and contingencies (notes 3 and 20)

On behalf of the Board:

A. S. CARTWRIGHT, Director

D. W. TIMMIS, Director

5

Canadian General Electric Company Limited and Consolidated Affiliates

Consolidated Statement of Changes in Financial Position (\$000's)

	For the years ended December 31	1980	1979
SOURCE OF FUNDS:			
	From operations Disposition of plant and equipment Increase in long-term borrowings Contribution from parent company Increase (decrease) in long-term receivables and investments	\$ 87 959 5 845 9 290 - 3 321	\$ 77 247 2 128 11 695 4 694 (1 402
		106 415	94 362
APPLICATION OF FUNDS:			
	Property, plant and equipment additions Dividends Other assets and liabilities	85 998 14 721 5 964	46 860 14 316 7 016
		106 683	68 192
NET INCREASE (DECREASE) IN WORKIN WORKING CAPITAL, BEGINNING OF YE		(268) 248 223	26 170 222 053
WORKING CAPITAL, END OF YEAR		\$247 955	\$248 223

The information on pages 12 and 17-20 is an integral part of this statement.

## Financial Statement

Canadian General Electric Company Limited

Canada Business Corporations Act.
These notes explain the more significant items included in the Financial Statements on principles, including those specifically

### 1. SALES

Industry segment sales and other industry segment information is disclosed on page 20.

in 1980 amounted to \$27.5 million (1979 - \$13.9 million).

Export sales in 1980 were \$158.4 million (1979 – \$127.8 million).

Sales to the parent company and its affiliates

### 2. OPERATING COSTS

Operating costs include research and development costs of \$20.4 million in 1980 (1979 – \$16.3

Purchases of goods and services from the parent company in 1980 amounted to \$249.6 million (1979 - \$237.4 million).

### 3. EMPLOYEE COMPENSATION, INCLUDING BENEFITS

Employee compensation and benefits amounted to \$463.9 million in 1980 (1979 - \$408.1 million). The cost of benefits included \$23.4 million for Company pension and life and health insurance plans and \$16.8 million of Company costs for government pension, unemployment insurance, workmen's compensation, and health insurance plans.

Unfunded obligations of all pension plans in the consolidated group at January 1, 1980 were determined by independent actuaries to be \$89.2 million (January 1, 1979 – \$58.1 million) including liabilities arising from 1980 benefit improvements to the plans. These obligations are noraccordance with government legislation. The assets of these pension plans at January 1, 1980 were recorded at \$330,9 million (January 1, 1979 – \$300.2 million).

The most significant of these pension plans is the Canadian General Electric Pension Plan which is funded by the Canadian General Electric Pension Trust, condensed statements of which appear below:

### Canadian General Electric Pension Trust Condensed Operating Statement (\$000's)

December 31	1980	1979
Company current and		
past service		
contributions \$	7 933	\$ 6 775
Employee current		
service contributions	.793	4 750
Dividends, interest and		
sundry income	25 086	19 790
Gains on disposition	4.4.480.1	
of investments	14 470	6 430
Reduction of unrealized		
appreciation	(4 609)	(2.661)
recognized Paraigna paid	(4692)	
	(15 728)	
	27 862	20 271
Assets transferred from		
affiliated company's		
pension fund	568	
Total assets at	D 457 O 40	
beginning of year	247 649	227 378
Total assets at end of		
year \$	276 079	\$247 649
Canadian General Electr	ic Pensi	on Trust

# **Condensed Statement of Financial Position**

At December 31	1980	1979
Bonds Stocks	\$ 81 643 66 723	\$ 71 934 73 124
Mortgages and income producing properties Short-term investments	76 592 47 544	64 408 33 334
Other assets – net	272 502 3 577	242 800 4 849
	\$276 079	\$247 649

### 4. OTHER INCOME (000'S)

For the years ended December 31	1980		1979
Net loss of finance			
subsidiary	\$ (463)	\$	(554)
Share of net loss of			
associated company	(221)		(559)
Income from:			
Royalty and technical			
agreements	470		1 083
Customer financing	. <b>756</b>		746
Long-term			
receivables	2 962		3 113
Short-term and other			
investments	1 371		3 757
Disposition of			
property, plant			
and equipment	1 575	,	996
Other sources	3 236		2 276
	\$ 9 686	\$	10 858

### 5. PROVISION FOR INCOME TAXES (\$000'S)

For the years ended December 31	1980		1979
Currently payable Deferred	\$ 12 285 10 344		350 4 315
	\$ 22 629	\$ 24	4 665

#### 6. DIVIDENDS DECLARED

\$1.80 (1979 - \$1.75) per common share.

#### 7. SHORT-TERM INVESTMENTS

interest-bearing loans secured by commercial paper due on demand or within periods generally not exceeding 30 days.

At December 31	1980	1979
Customers' accounts	\$235 561	\$243 526
Due from parent		
company	11 936	4 866
Due from		
non-consolidated		
subsidiary	. 157	383
Progress payments to		
suppliers	10 739	10 914
Other receivables	18 400	14 729
	\$276 793	\$274 418
9. INVENTORIES (\$000'S	S)	
At December 31	1980	. 1979
Raw materials and work		
in process	\$201 341	\$185 228
THE CALL OF THE PARTY OF THE PA	142 497	138 827
Finished goods		
Unbilled shipments	38 109	<b>28 563</b>

Unbilled shipments represent the cost of products shipped, for installation at customers' sites, to which title has not passed.

As stated in the summary of significant accounting policies, the first-in, first-out (FIFO) method is used to determine the cost of substantially all inventories. The last-in, first-out (LIFO) method is used to determine the cost of the copper and aluminum content. Had the FIFO method been used for all inventories, these would have been greater by \$5.2 million (1979 – \$7.2 million).

### 10. LONG-TERM RECEIVABLES

Long-term receivables were discounted, where appropriate, at interest rates prevailing at the time of the related transactions. These discounts are amortized and credited to income over the term of such receivables.

### 11. LONG-TERM INVESTMENTS (\$000'S)

At December 31	1980	1979
Investment in finance subsidiary	\$ 7 378	\$ 7 841
Investment in associated company Other	1 317 1 005	1 476 1 017
	\$ 9 700	\$ 10 334

A condensed consolidated balance sheet of the finance subsidiary, Genelcan Limited, appears below (\$000's):

At December 31	1980	1979
ASSETS: Finance receivables Other assets	\$ 81 683 975	\$ 78 590 2 280
	\$ 82 658	\$ 80 870
LIABILITIES: Short-term Long-term	\$ 50 280 25 000	\$ 48 029 25 000
Capital stock Retained earnings	75 280 5 000 2 378	73 029 5 000 2 841
	\$ 82 658	\$ 80 870

## 12. PROPERTY, PLANT AND EQUIPMENT (\$000'S)

Major classes at		
December 31	1980	1979
Land and improvements	\$ 10 291	\$ 8 171
Buildings	112 477	105 423
Machinery and		
equipment	301 642	259 930
Leasehold	0.054	1.014
improvements	2 071	1 814
Oil and gas resource	21 297	6 888
properties	41 497	0 000
	447 778	382 226
Less accumulated depreciation and amortization:		
Buildings Machinery and	<b>59 750</b>	57 879
equipment	193 732	i80 975
Leasehold	-00 .02	100 213
improvements	1 234	1 018
	254 716	239 872
Undepreciated cost at		
December 31	\$193 062	\$142 354

13. DEFERRED CHARGES AND OTHER ASSETS Deferred charges include \$16.5 million being the balance of a special advance payment made to the Canadian General Electric Pension Trust to fund the vested portion of the unfunded pension liability. This pension cost is being amortized to operations over the next eleven years, which approximates the remaining service lives of the employees affected. Also included is \$2.5 million relating to goodwill on the acquisition of businesses which is being amortized to operations over varying periods.

14. SHORT-TERM BORROWINGS

Short-term borrowings at December 31, 1980 include \$55.9 million (1979 – \$8.1 million) due to Canadian chartered banks of which \$7.3 million (1979 – 3.6 million) is in respect of the appliance affiliate. Also included is the current portion of long-term borrowings of \$1.3 million (1979 – \$1.3 million).

#### 15. ACCOUNTS PAYABLE

Accounts payable include amounts due to the parent company incurred in the normal course of business of \$47.2 million (1979 – \$77.0 million) which are settled on normal commercial terms.

16. OTHER LIABILITIES AND ACCRUALS
Other liabilities and accruals at December 31,
1980 include \$27.7 million (1979 – \$27.8 million)
in respect of employee compensation and
benefits including vacations, \$25.5 million
(1979 – \$23.6 million) for warranties and \$6.1
million (1979 – \$5.3 million) in respect of
accrued amounts due to the parent company.

17. LONG-TERM BORROWINGS

The appliance affiliate has negotiated bank borrowing agreements to provide for a line of credit for a period of 18 months, such period renewable every six months. Accordingly, these bank borrowings have been classified as long-term and amount to \$49.5 million at December 31, 1980 (1979 – \$42.2 million) with interest rates related to market and official prime. These borrowings are secured by a general assignment of the affiliate's accounts receivable and inventories, a fixed charge on its real property, and a first floating charge on its other assets.

The remaining balance of \$4.8 million (1979 – \$2.8 million) represents certain special purpose loans of which \$0.6 million is with a Canadian chartered bank.

Interest on long-term borrowings amounted to \$9.0 million (1979 – \$7.7 million).

At December 31		1980	1979
			*>1>
Accrual for pensioners life insurance benefits	8	26 579	\$ 23 957
Accrual for certain past	Ψ	20010	Ψ 23 931
service pension			
benefits, principally			
vested		4 807	6 670
		31 386	30 627
Less amount due within one year included			
with other liabilities			
and accruals		1 291	2 859
	\$	30 095	\$ 27 768
19. CAPITAL STOCK (\$00	2000	)	
At December 31	<i>7</i> 0	, 1980	1979
		1300	1979
Common shares: Authorized, issued			
and outstanding			
8 178 800 shares			
without nominal or		00010	
par value	\$	26 942	\$ 26 942
Special employees' preferred shares:			
Cumulative			
redeemable at par			
value of \$50 per			
share. Authorized, issued and			
outstanding 1 059			
shares (1979 – 1 186			
shares)		53	60
	\$	26 995	\$ 27 002

20. COMMITMENTS AND CONTINGENCIES The Company is contingently liable under guarantee for notes payable by its non-consolidated finance subsidiary, Genelcan Limited, which at December 31, 1980 amounted to \$76.2 million. Operating lease commitments, liabilities under purchase commitments, pending litigation and claims, in the opinion of management, are not considered to be material in relation to the Company's financial position.

The Company has entered into an agreement to purchase, subject to government approval, all of GSW Inc's interest in Canadian Appliance Manufacturing Company Limited for \$21.4 million.

	Revenues for the years ended December 31
	External Sale Total Revenues Intersegment Sales and Other Incom
	<b>1980</b> 1979 <b>1980</b> 1979 <b>1980</b> 1979
Electrical apparatus and components Consumer products and services Machinery, technical systems and materials General corporate items and eliminations	\$ 788 305       \$ 703 438       \$58 192       \$52 974       \$ 730 113       \$ 650 46         498 961       448 517       11 615       9 814       487 346       438 70         270 036       269 266       15 990       15 638       254 046       253 62         (81 745)       (71 633)       (85 797)       (78 426)       4 052       6 79
Total	\$1 475 557 \$1 349 588 ** \$ - \$ + \$1 475 557 \$1 349 58
	Segment operating profit for Net earnings for the years the years ended December 31 ended December 31
	1980 1979 1980 1979
Electrical apparatus and components Consumer products and services Machinery, technical systems and materials	\$50 033 \$39 078 \$22 977 \$17 966 28 788 32 291 9 601 12 904 13 712 18 945 6 639 10 536
Total segment operating profit General corporate items and eliminations Interest and other financial charges	92 533 90 314 (11 451) (16 846) 5 709 (3 076) (12 591) (8 264)
Total	<b>\$68 491 \$65 204 \$44 926 \$38 330</b>
	Property, plant and equipment for the year Assets at December 31 ended December 3
	Additions Depreciation
	1980 1979 1980 1979 1980 1979
Electrical apparatus and components Consumer products and services Machinery, technical systems and materials General corporate items and eliminations	\$454 013       \$401 343       \$36 055       \$21 001       \$15 455       \$12 88         245 992       229 506       9 593       10 070       7 002       6 62         176 201       174 302       24 784       9 561       6 700       4 02         80 505       98 997       15 566       6 228       286       23
Total	\$956 711 \$904 148 \$85 998 \$46 860 \$29 443 \$23 76

### SEGMENTATION ACCOUNTING

In accordance with CICA recommendations on segmented information, businesses were grouped into three Industry Segments. These segments do not necessarily follow the Company's business organization structure.

Company's business organization structure.
In general, it is the Company's policy to price internal sales at approximately the equivalent commercial selling prices.
Corporate items include the elimination of

Corporate items include the elimination of intersegment sales, sundry income and expense items, and gains and losses associated with business acquisitions and divestitures.

In computing net earnings, general corporate expenses and interest and other financial charges have been allocated to the industry segments. General corporate expenses are allocated principally on the basis of cost of operations with certain exceptions and reductions which recognize the varying degrees to which affiliated companies maintain their own corporate structures. Interest and other financial charges are allocated to parent company business components based principally on cash flow, whereas affiliated companies generally service their own debt. The provision for income taxes is based on the prevailing corporate income tax rates. The minority interest is included in general corporate items.

### ELECTRICAL APPARATUS AND

COMPONENTS

includes hydro generators, steam turbinegenerators, industrial and transportation motors and controls, small motors, electrical components and controls, transformers, switchgear, meters, appliance controls and the maintenance, inspection, repair and rebuilding of electrical and mechanical apparatus.

CONSUMER PRODUCTS AND SERVICES consists of major appliances and appliance service, lighting products, housewares and audio products and air conditioning equipment.

### MACHINERY, TECHNICAL SYSTEMS AND MATERIALS

includes hydraulic turbines, heavy machinery for the mining, paper and steel industries; jet engines for aircraft; electronic, communication and data communications equipment; materials including plastics, silicones, industrial cutting materials, and laminated and insulating materials; and computer timesharing and remote data processing services.

## Report of Management to the Directors

We have prepared the accompanying consolidated statement of financial position of Canadian General Electric Company Limited and consolidated affiliates as at December 31, 1980 and 1979, and the consolidated statements of earnings, retained earnings and changes in financial position for the years then ended, including the notes to the financial statements. The statements have been prepared in conformity with accounting principles generally accepted in Canada, as include amounts that are based on our best estimates and judgments. Financial information presented elsewhere in this Annual Report is consistent with that in the financial statements.

The Company maintains a system of internal financial controls and procedures, supported by a corporate staff of travelling auditors and supplemented by resident auditors located at various Company locations. This system of financial controls is time-tested and responsive to change. An important safeguard in this system for the shareholders is the Company's long-standing emphasis placed on the selection, training and development of professional financial managers to implement and oversee the proper application of its internal controls.

The Company's independent auditors, appointed by the shareholders, provide an objective, independent review of management's discharge of their responsibilities as they relate to the fairness of reported consolidated operating results and financial condition of the

Company in accordance with generally accepted accounting principles.

The Audit Committee of the Board of Directors is composed solely of outside directors. The shareholders' auditors have free access to this Committee, without management present, to discuss the results of their audit work and their opinion on the adequacy of internal financial controls and the quality of financial reporting.

The Company's management recognizes its responsibility for conducting the Company's affairs in a manner to comply with the recording and reporting requirements of applicable laws and established financial standards and principles, and for maintaining proper standards of conduct in its domestic and international activities.

Chairman of the Board and Chief Executive Officer

alton & Canturity AS

Vice President – Finance January 30, 1981

CB Hallo

# Auditors' Report to the Shareholders

Peat, Marwick, Mitchell & Co.

We have examined the consolidated statement of financial position of Canadian General Electric Company Limited and consolidated affiliates as at December 31, 1980 and 1979, and the consolidated statements of earnings, retained earnings and changes in financial position for the years then ended. Our examinations were

made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at December 31, 1980 and 1979, and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

Peat, Marwick, Mitales alo.

Chartered Accountants

Toronto, Canada January 30, 1981

Ten Year Summary	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971
Canadian General Electric Company Limited and Consolidated Affiliates	(Dollar amounts in millions except per share amounts)									
Sales of products and services Net earnings (before extraordinary items) Net earnings per share Earnings as percentage of sales	\$1 466 44.9 5.49 3.1%	\$1 339 38.3 4.69 3.0%	\$1 104 33.6 4.11 3.2%	\$1 080 30.5 3.73 2.9%	\$ 879 32.7 4.00 3.7%	\$ 822 36.1 4.41 4.4%	\$ 710 23.4 2.92 3.4%	\$ 583 18.7 2.28 3.2%	\$ 530 16.5 2.02 3.1%	\$ 496 13.2 1.62 2.7%
Market price of last sale of the year: Per common share Dividends on common shares	\$33.00 \$ 1.80	\$29.50 \$ 1.75	\$28.00 \$ 1.60			\$24.25 \$ 2.20*				
Current assets Current liabilities Total assets	\$ 683 435 957	\$ 681 433 904	\$ 532 310 730	\$ 497 313 666	\$ 407 239 571	\$ 441 - 289 - 602	\$ 383 247 564	\$ 256 · 132 · 430	\$ 234 127 410	\$ 241 142 413
Plant and equipment additions Depreciation and amortization Provision for income, property, and capital taxes	\$ 86.0 29.4 33.5	\$ 46.9 23.8 35.2	\$ 28.8 20.6 26.2	\$ 25.3 17.6 23.9	\$ 21.1 15.7 30.5	\$ 21.1 16.8 34.6	\$ 24.8 18.5 24.8	\$ 14.2 16.5 21.3	\$ 15.0 17.2 20.6	\$ 16.7 12.6 14.8
Average number of employees	20 549	19 767	18 662	18 823	17 512	18 789	19 193	17 890	17 583	17 950

<sup>\*</sup>Includes a special dividend of \$1.00 per share

## **Consumer and Construction Products Division**



The Consumer and Construction Products Division enjoyed another good year despite the impact on many businesses of the further downturn in housing starts and the slump in North American automobile sales. However, strong performance in many businesses including Mobile Communications, Information Services, Aeroengines and Silicones more than offset the overall economic downturn. With sales substantially above the previous year excluding major resale, the Division made a significant contribution to Company results.

The decision by the Federal Government to procure the GE powered CF-18A fighter plane will result in the start of construction in 1981 of a plant at Bromont, Québec. The magnet wire operation of Pirelli Cables Limited in Guelph, Ontario, was acquired to further strengthen our position in this market. The Division expanded its commitment in Western Canada with the acquisition of Widney Well Servicing (1971) Limited. This company services oil and gas wells.

With the sustained thrust to achieve lower costs and increase productivity, capital spending on automated equipment increased a further 32% in 1980 following the 81% increase in 1979. Similarly, expenditures on research and development to provide new and more efficient products were increased 42% in 1980.

Energy efficiency received top priority with emphasis on advanced computerized traffic control equipment, programmable lighting control systems, WEATHERTRON® heat pumps, light-weight assemblies for the new smaller automobiles, and new lamp product introductions including the halogen automotive lamps and the self-ballasted BRIGHT STIK® home fluorescent lamps.



MATERIALS AND SPECIALTY SYSTEMS DEPARTMENT.

Despite the recession, 1980 was a favorable year for the Department.

The Government's decision to purchase the CF-18A Fighter Aircraft powered by two F404 General Electric engines resulted in a major program of activity for the Materials and Specialty Systems Department during the year.

Canadian General Electric played a significant role in developing an "offset" package of industrial benefits acceptable to the Canadian Government. As a result, the Department is proceeding with the construction of a \$60 million high technology plant to be located at Bromont, Québec. The plant will manufacture precision compressor airfoils for the expanding world market in commercial and military aircraft engines.

Another activity associated with the industrial benefits program was a \$3 million investment in filament wound composites which will provide advanced products and new semi-automatic facilities with greatly enhanced productivity at the St. André, Québec, plant.

In 1980, a \$3.5 million investment in equipment for manufacturing molded composites to be exported from the Cobourg, Ontario, plant has given the facility world competitive productivity.

New equipment includes large robotized molding presses and automated robotized finishing.

In co-operation with General Electric's Corporate Research and Development Laboratories and McMaster University, the Department developed new computeraided design and manufacturing techniques adapted to one-of-a-kind manufacturing, particularly the manufacture of plastic molding dies and forging dies for export. The feasibility of this program was validated during the year by the successful molding at Cobourg of a commercial part from the first mold completely designed and manufactured by computer anywhere in the world.

This project complements the world-wide GE thrust into plastics for engineering applications with LEXAN®, NORYL® and VALOX® resins. These resins provide a unique combination of high strength, low weight and low fabricating costs which make them particularly suitable for the new energy efficient automobiles. Several significant applications were achieved in 1980.

The development of a low-cost solid state TV broadcast transmitter designed by CGE and suitable for world markets added to the commitment in the industrial benefits program. When representatives of the Department's Broadcast Sales Group

ABOVE LEFT: Robert T. E. Gillespie VP and Division Executive

ABOVE: RIGHT
New 1500 ton press at Cobourg for manufacture of plastic components.



exhibited the transmitter at a trade show in Las Vegas, it resulted in the sale and shipment of two transmitters to Mexico.

Our CENTURY II® mobile radio enjoyed continued success in 1980. This is a lowcost high-performance radio which is almost free of internal wiring. The Department received a contract to service all of the mobile radios used by the Ontario Provincial Police.

Computer time-sharing, computer terminals, silicones, industrial diamonds and CARBOLOY® tools, each part of the Department's business mix, performed well over the year, contributing to the Department's results.

### LAMP DEPARTMENT.

The Lamp Department achieved another strong year of growth in sales and earnings, with increased customer acceptance of its expanding line of lighting products in domestic and international markets.

While some products felt the effects of the automotive and general economic slowdown, these weaknesses were more than offset by continued growth in energy efficient products such as WATTMISER® fluorescent lamps, LUCALOX® lamps, and MULTIVAPOR® lamps; and with recent product introductions including a full line of halogen automotive headlamps and BRIGHT STIK®, a self-ballasted portable home fluorescent lamp.

Research and development expenditures more than doubled in 1980 with emphasis on new manufacturing equipment designs, new CGE products for export markets, and higher efficiency products for all our customers.

Employee development and training programs stressed the importance of managing resources to ensure the Department can continue to respond to the changing demands of the market-place.

Specialized courses were implemented in co-operation with leading Canadian post-secondary institutions to facilitate the application of new technologies. This emphasis on management development and skill training complements the investment programs in manufacturing equipment at four plant locations in Québec and Ontario. All of these actions contribute to the Department's ongoing objective of supplying the user with energy-efficient products providing increased lighting value.



ABOVE

CGE Lamp products have applications for commercial, residential, automotive and street lighting.

LEFT

High pressure fibreglass pipe used in petroleum operations is spun by computer under the technician's watchful eye.



HOUSEWARES AND HOME ENTERTAINMENT DEPARTMENT.

In 1980, the Housewares and Home Entertainment Department completed programs started in 1979 to modernize its kettle and frypan manufacturing operations, spending over \$4 million dollars on plant and equipment. Productivity in kettle production was improved by using power and free conveyors to reduce material handling and handling damage. Other changes included the mechanization of silicone rubber application to replace hand soldering to reduce costs and the installation of automatic electrical and function test equipment to improve product quality.

For frypan manufacturing, new equipment designed to improve productivity included a computer controlled rotary molding machine for casting aluminum frypan bodies, horizontal injection molding machines using the General Electric hot cone process to reduce cycle times, and a four booth surface finish paint and SILVERSTONE – (registered trademark of E.I. Dupont de Nemours and Company) automatic spray coating facility requiring only set-up manpower to operate. These changes give the Department the capability and the resources to produce these products at world competitive cost for all export markets and the General Electric international system.

The second phase of a manufacturing control system using an on-line computer was implemented in 1980. This new system maintains an up-to-date record of fabricated parts as they move through various operations in the press and surface finish areas. This means manufacturing management has a knowledge of part status at any time. It results in reduced in-process inventories and improved information for schedule change decisions.

The Canadian housewares industry experienced fewer new model introductions in 1980 compared with prior years. Therefore CGE model introductions, such as the new kettle, were welcomed by the



trade and consumers. There was good response for the first model of a new line of full-size LIGHT 'N EASY® plastic irons. Other product introductions included a four-slice side-by-side toaster and frypans featuring a durable "SILVERSTONE" non-stick surface. In 1980, thirteen new products were introduced into the market.

CGE Audio Products improved market share of radio and tape recorder products during the year. Audio products continue to be promoted as part of the "Hockey Night in Canada" advertising program of Canadian General Electric.

Following a successful year in 1979, sales of "WEATHERTRON®" heat pumps increased significantly. Consumer awareness of energy saving benefits and heating and cooling opportunities with heat pumps, along with an effective network of dealer-contractors, contributed to the increase in sales. Last October, the Federal Government announced a program of substantial grants to consumers and others who switch from oil to other forms of energy including gas and electricity. The grant program, coupled with rising oil costs, will add impetus to market penetration programs.

The subsidiary company, N. C. Joseph

Ltd., located in Stratford-Upon-Avon in the U.K., completed yts first full year as part of the Department, profitably, implementing a strategy of increased emphasis on serving the U.K. housewares market. New products introduced include can openers, sandwich makers, deep fryers, skillets, drip coffeemakers, and hair dryers. Improvement in plant productivity was achieved through the study and analysis of existing work methods and practices.

CONSTRUCTION PRODUCTS DEPARTMENT. During 1980, the Department adapted to a downturn in housing starts and a slump in North American automobile sales by continuing to increase its focus on high growth, high technology industrial and and energy management segments of the market.

Wire and cable operations underwent major strategic restructuring during the year. The acquisition of the magnet wire operation of Pirelli Cables Limited located at Guelph, Ontario, was an important advance in strengthening the Construction Products Department's position in this market against increasing international competition. Concurrently with this acquisition, the manufacture of power cable and building wire was discontinued.

The Department placed itself in the forefront of traffic systems through the acquisition of advanced computerized traffic control technology. With contracts in progress for supplying the Ontario municipalities of Waterloo, Brantford and Durham with this system, attention is being focussed on the potential world markets for this technology. A new solid state controller and allplastic traffic signal were also developed in 1980.

ABOVE:

ELECTROMULCH® - electric lawn mower.

LEFT

These CGE housewares and audio products were star performers with consumers this year.



Energy efficient products designed to reduce substantially the cost of lighting were particularly successful in 1980. A programmable lighting control (PLC) system, designed to turn lights on and off exactly when and where they are needed, was installed in the First Canadian Place in Toronto, the largest office building in the country. The Scotia Tower in Vancouver was retrofitted with energy saving CGE Low-Intensity Ballasts. The

sales of energy-efficient High Intensity Discharge (HID) industrial lighting fixtures continued to grow significantly.

The Department continued to invest heavily in advanced manufacturing equipment to increase both productivity and capacity. Examples of these investments include a new automated pour and test facility now operating in the Ballast Section. A second numerically-controlled punch press was installed in the circuit

protective devices/distribution assemblies plant at Markham, Ontario, considerably increasing productivity by eliminating several conventional punch presses.

Export sales are a growing contributor to the Construction Products Department income. In 1980, baseboard heaters made good progress into the highly competitive U.S. market. The acceptance of this high quality product could result in further growth in future.



GESCAN®.

As a wholesale distribution business, GESCAN developed a specific focus on productivity during 1980:

Productivity of working capital, particularly inventory, which is a distributor's main asset in accounting terms.

 Productivity of people – a distributor's other major asset in non-accounting terms.

GESCAN was able to record a 12% improvement in the productivity of inventory working capital over the year. This was aided by an intensive program to increase management attention on inventories with particular emphasis on identifying and disposing of slow-moving products.

The people at GESCAN addressed productivity with a three-pronged effort during 1980. The warehouse improvement project identified opportunities to improve

physical productivity through increased use of mechanized materials handling equipment, improved warehouse layout, and racking configuration. A new inventory system was implemented to reduce the physical effort involved in counting and maintaining records on over 120 000 stock-keeping units in GESCAN® inventory. The on-line order entry system was expanded to eliminate much of the routine work of processing orders in GESCAN® smaller locations.

Working together, GESCAN® support staff participated in these programs and achieved a 5% increase in productivity.

As part of a continuing investment program in the future of the electrical wholesale distribution industry, GESCAN opened four new sales outlets in 1980 and made major space expansions in eight others.

During the year, GESCAN continued in its role as a major distributor to the con-

struction project market with participation in such projects as the Bentall Four office complex in Vancouver, the Esso Plaza in in Calgary, Phase II of First Canadian Place in Toronto, and Scotia Place in Edmonton.



ABOVE

Across Canada, GESCAN employees use computerized communication and inventory control systems to serve customer needs.

### Canadian Appliance Manufacturing Company Limited



Canadian Appliance Manufacturing (CAM) Company Limited has plants in Hamilton, London, Montreal, Orangeville and Weston. The company manufactures automatic washers and dryers, dishwashers, ranges, microwave ovens, refrigerators, freezers, air conditioners, dehumidifiers, and humidifiers.

Four well-known brands-General Selectric, Hotpoint, McClary and Moffat - are sold to retailers and the building trade across Canada. (McClary and Moffat are registered trademarks of GSW Inc.) The export market is being developed as one of the company's major business objectives.

Product innovation, service and productivity improvement continued to receive high priority at Canadian Appliance Manufacturing Company during 1980. Dealers were introduced to the General Electric POTSCRUBBER® II dishwasher built at the CAM Company Hamilton plant with an enthusiastic reception of the product by customers in May of 1980. The POTSCRUBBER® II, designed for the 80's, outperforms the competition while using 30% less energy than previous models.

The company began manufacturing the SPACEMAKER® and COUNTERSAVER® microwave ovens for the General Electric and Hotpoint brands, at its Orangeville

In 1980, emphasis was placed on streamlining and revitalizing the consumer service operation to achieve an industry leadership position. Several programs were undertaken in line with this objective, including the integration of 32 branches, and installation of clean, bright appliance parts self-serve showrooms installed across Canada. Consumers wishing to buy parts and accessories for Company-built appliances can do so in these new improved facilities.

A series of management development programs contributed to productivity and efficiency in the consumer service operation. A computerized system for the measurement of technician productivity was put on line and a second computerized system is now being used to analyze service calls and transmit the information to the manufacturing operations.

These customer service efforts were backed up by in-plant training programs for managers with a focus on productivity and quality. By year-end, over 50% of the engineering and manufacturing staff at the Weston plant had taken a variety of courses with specific emphasis on productivity improvement. Other training activities focussed on product quality control and were designed for representatives from all functional and product areas. The concept emphasized in these courses was that



successful product quality control requires specific contributions from all major areas of the Company.

Quality and productivity go hand in hand with leading technology. Additional training programs for leaders in the technical group were implemented in preparation for the explosive growth of electronics which will impact on the company's manufacturing processes as well as its products in the immediate future.

Transportation is a significant factor in the cost and distribution of products, and major continuing programs were undertaken to address this priority. Company specialists are working with the transportation industry to design and develop railroad cars which will have increased capacity to carry products to market. The Montreal and Hamilton distribution centres now have the capability to load railroad cars thus reducing time and improving efficiency.

The company entered the 80's with the first implementation of a robotics program located at the Hamilton dishwasher plant. The installation is used in the spraying of dishwasher tubs and panels and represents an investment in new technology to improve productivity strengthening the competitive thrust of the Company in

the future.

ABOVE LEFT: W. R. C. Blundell President and Chief Executive Officer

ABOVE RIGHT: The General 🌑 Electric POTSCRUBBER® 11 Dishwasher is an achievement in product innovation

### A Commitment to Technology

Research and development at Canadian General Electric is a total company effort dedicated to the pursuit of excellence in the products we make, the way we make them, and the way they perform for our customers. It is also a tradition, traceable to the earliest history of the Company. When Canadian General Electric built its first major hydroelectric generation projects in Canada, it entered the century as a high-technology company. With growth and diversification, the Company developed a group of customers each with unique technology requirements. Last year, the engineering laboratory in Peterborough marked its 25th year of applied research to meet the needs of Canada's major industries and electric utilities. The experimental laboratory at Dominion Engineering Works in Lachine, built in 1933, evaluates new designs by building models and measuring their performance through finite analysis.

Technology is a human commitment at CGE. The 850 engineers and scientists on our technical staff, 60 of whom hold advanced degrees, bring distinction to the Company not only for their tireless efforts to maintain CGE's competitive reputation, but more particularly, for the recognition they receive from the technology

community at large.

This year, two engineers in the Industrial Apparatus Department were honored for their outstanding contributions to technology. Peter Eastcott received the MacParland Medal of the Canadian Institute of Mining and Metallurgy, and John Young was awarded the Engineering Medal of the Association of Professional

Engineers of Ontario.

Through their work at Canadian General Electric and on external projects, engineers and scientists add to the body of technical knowledge which helps keep Canada in step with world competition. CGE engineers presented five papers to international technical conferences in the United States and Europe last year on such topics as nuclear fuel processing and generator insulation. Another six papers were presented to Canadian technical conferences. Canadian General Electric inventors were awarded 22 patents for their inventions during the year in areas such as consumer products, rotating electrical machinery and mining equipment.



### TECHNOLOGY ACHIEVEMENTS FOR CANADIAN INDUSTRY

Many of our customers are vigorous competitors at home and abroad, and we are proud to be part of that success. Last year, CGE research and development efforts expanded that cooperation.

For the pulp and paper industry, CGE developed a new digitally-controlled paper mill drive using advanced micro-electronic techniques. The system has exceptional accuracy of control, ease of operation and maintenance.

For the mining industry, CGE developed a new quadratorque system involving the use of synchronous motors to drive autogenous grinding mills. A new scoop tram or front end loader was also developed for the mining industry, and CGE introduced a new design of ring gears for grinding mills which combines high reliability and lower installation costs. A significant breakthrough was achieved in the lubrication of bearings for large grinding mills using an instrumentation technique designed by CGE.

For the steel industry, CGE is developing two hot strip mills which will be completely under computer controls. Modifications in rolls for hot strip mills introduced by Dominion Engineering Works will yield longer roll life, better surface quality, and provide cost reduction and productivity gains for customers.

In the utility market, the achievements of the technology group continued to make significant contributions to Canada's energy development. The first bulb-type hydroelectric generator installed on the St. Mary's River near Sault Ste. Marie was built by Canadian General Electric. This

technology will open the way for tapping "low head" hydro potential and substantially reduces construction costs. The first large rim-type generator in North America is under development for installation at the Annapolis Royal Tidal Project in Nova Scotia. The generator will harness tidal flow in the Bay of Fundy for the production of electric power.

Further advances were made in the technology of high voltage transformers and a new high voltage resistance switch.

With the emphasis on weight reduction for the new world cars, CGE's commitment involves advanced technology for the processing of polyester glass to be used in the new "J" world car, manufactured by General Motors.

CGE technology is at work in developing Canadian oil resources. The Company is introducing a new XPAR® high-pressure fibreglass pipe which competes with steel and other fibreglass products in petroleum field gathering systems in Canada's west.

IMPROVING THE WAY WE DO THINGS
Research is not limited to new product
development, and emphasis is placed on
applying high technology to higher
productivity in the manufacturing process.
Installations have been completed for the
manufacture of housewares products
concentrating on advance techniques for
molding and testing products.

Micro-processor controls for specialized machinery used to manufacture electric motors and lamps are being added to maintain processes in step with this revolutionized technology. The use of computers to improve design in the manufacturing function was extended with the introduction of interactive graphics systems for the design of heavy machinery integrated with computer and numerically-controlled machine tools. Unique software packages developed by CGE for interactive graphics systems bring about high productivity in the cutting of materials used in the machinery.

Direct expenditures in research and development increased by 25% in 1980 to \$20 million. These expenditures, complemented by the achievements of our technology group, are a concrete application of resources for progress. At CGE, progress in technology is measured by the performance of products and the contribution made to Canadian industries in helping them maintain competitive strength.

### **Directors**

Canadian General Electric Company Limited

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Executive Vice President and Sector Executive Industrial Products and Components Sector General Electric Company Fairfield, Connecticut

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Chairman of the Board and Chief Executive Officer Canadian General Electric Company Limited Toronto, Ontario

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President and Chief Executive Officer Revelstoke Companies Ltd. Calgary, Alberta

### Frank P. Dovle

Vice President Corporate Employee Relations Operation General Electric Company Fairfield, Connecticut

### Robert R. Frederick

Executive Vice President and Sector Executive International Sector General Electric Company Fairfield, Connecticut

### Robert B. Kurtz

Senior Vice President Corporate Production and Operating Services General Electric Company Fairfield, Connecticut

### Hon.

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### H. Ian Macdonald

President York University Toronto, Ontario

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Vice President Corporate Financial Administration General Electric Company Fairfield, Connecticut

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### MacKenzie McMurray

Corporate Director Montreal, Québec

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The Algoma Steel Corporation,
Limited
Toronto, Ontario

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S. Curry

R. R. Frederick

R. B. Kurtz

H. I. Macdonald

T. E. McClary

W. F. McLean

D. W. Timmis

A. Turmel

W. G. Ward

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F. P. Doyle

R. R. Frederick

M. Lamontagne

M. McMurray

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W. G. Ward

A. M. Wilson

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### Compensation Committee

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R. R. Frederick

W. F. McLean

M. McMurray

A. Turmel

### **Public Affairs Committee**

M. Lamontagne

H. I. Macdonald

M. McMurray (Chairman)

Management

Canadian General Electric Company Limited

Alton S. Cartwright
Chairman of the Board and
Chief Executive Officer

### **OPERATIONS**

D. Forrest Rankine

VP and Division Executive Apparatus and Heavy Machinery Division

John H. Churchman

General Manager Power Delivery Department

Max Drouin

VP and General Manager Apparatus and Heavy Machinery Sales Department

L. Robert Douglas

VP and Manager Business Development

Walter R. Fell

VP and General Manager Dominion Engineering Works

Harold C. Dickout

VP and General Manager Power Generation Department

Merritt E. Gordon

VP and General Manager Industrial Apparatus Department

### **AFFILIATED COMPANY**

Canadian Appliance Manufacturing Company Limited (60% equity interest) W. R. C. Blundell President and Chief Executive Officer Robert T. E. Gillespie

VP and Division Executive Consumer and Construction Products Division

Russell M. Baranowski

VP and General Manager Housewares and Home Entertainment Department

Harry W. Johnson

VP and General Manager GESCAN Department

Richard T. Martin

VP and General Manager Construction Products Department

Walter E. Noble

VP and General Manager Materials and Specialty Systems Department

**Robert Story** 

VP and General Manager Lamp Department

### **CORPORATE**

Victor L. Clarke

VP and Corporate Executive Corporate Strategic Planning and Development

David F. Abel

VP – Corporate Strategic Planning and Review

Francis Moskal

VP - Corporate Manufacturing Planning and Review

Peter E. Pashler

VP-Corporate Technology

Ivan R. Feltham, Q.C.

VP – External Affairs, General Counsel and Secretary

Kenneth L. Broe

VP - Western Canada

Archibald F. Johnston

VP-Public Affairs and Government Relations

Carl B. Haller

VP-Finance

William J. Briggs

VP and Treasurer

V. Gerold Stafl

VP and Comptroller

**Terrance W. Sutherland**Manager – Corporate
Human Resource Operation

**Corporate Headquarters** 

Commerce Court North 25 King Street West Toronto, Ontario (416) 862-5500 Mailing Address: P.O. Box 417, Commerce Court North Toronto, Ontario M5L 1 J2

Auditors

Peat, Marwick, Mitchell & Co. Toronto, Ontario

Transfer Agent and Registrar

National Trust Company, Limited

Toronto, Ontario

Wholly-Owned Subsidiaries

Amalgamated Electric Corporation Limited Canadian General Electric International Limited Cange Limited (United Kingdom) Dominion Engineering Company Limited Dominion Engineering Works Limited Genelcom Limited Montreal Armature Company Limited N. C. Joseph Limited (United Kingdom) W. L. Stevens Ltd. Widney Well Servicing (1971) Ltd.

Non-Consolidated Wholly-Owned Subsidiary Genelcan Limited

Associated Company Smith & Stone Limited (34% equity interest)



Progress for people